

**§ 51.452 Procedures for determining regional transportation-related emissions.**

(a) *General requirements.* (1) The regional emissions analysis for the transportation plan, TIP, or project not from a conforming plan and TIP shall include all regionally significant projects expected in the nonattainment or maintenance area, including FHWA/FTA projects proposed in the transportation plan and TIP and all other regionally significant projects which are disclosed to the MPO as required by § 51.402. Projects which are not regionally significant are not required to be explicitly modeled, but VMT from such projects must be estimated in accordance with reasonable professional practice. The effects of TCMs and similar projects that are not regionally significant may also be estimated in accordance with reasonable professional practice.

(2) The emissions analysis may not include for emissions reduction credit any TCMs which have been delayed beyond the scheduled date(s) until such time as implementation has been assured. If the TCM has been partially implemented and it can be demonstrated that it is providing quantifiable emission reduction benefits, the emissions analysis may include that emissions reduction credit.

(3) Emissions reduction credit from projects, programs, or activities which require a regulation in order to be implemented may not be included in the emissions analysis unless the regulation is already adopted by the enforcing jurisdiction. Adopted regulations are required for demand management strategies for reducing emissions which are not specifically identified in the applicable implementation plan, and for control programs which are external to the transportation system itself, such as tailpipe or evaporative emission standards, limits on gasoline volatility, inspection and maintenance programs, and oxygenated or reformulated gasoline or diesel fuel. A regulatory program may also be considered to be adopted if an opt-in to a Federally enforced program has been approved by EPA, if EPA has promulgated the program (if the control program is a Federal responsibility, such as tailpipe

standards), or if the Clean Air Act requires the program without need for individual State action and without any discretionary authority for EPA to set its stringency, delay its effective date, or not implement the program.

(4) Notwithstanding paragraph (a)(3) of this section, during the transitional period, control measures or programs which are committed to in an implementation plan submission as described in §§ 51.428 through 51.432, but which has not received final EPA action in the form of a finding of incompleteness, approval, or disapproval may be assumed for emission reduction credit for the purpose of demonstrating that the requirements of §§ 51.428 through 51.432 are satisfied.

(5) A regional emissions analysis for the purpose of satisfying the requirements of §§ 51.436 through 51.440 may account for the programs in paragraph (a)(4) of this section, but the same assumptions about these programs shall be used for both the “Baseline” and “Action” scenarios.

(6) Ambient temperatures shall be consistent with those used to establish the emissions budget in the applicable implementation plan. Factors other than temperatures, for example the fraction of travel in a hot stabilized engine mode, may be modified after interagency consultation according to § 51.402 if the newer estimates incorporate additional or more geographically specific information or represent a logically estimated trend in such factors beyond the period considered in the applicable implementation plan.

(b) *Serious, severe, and extreme ozone nonattainment areas and serious carbon monoxide areas after January 1, 1995.* Estimates of regional transportation-related emissions used to support conformity determinations must be made according to procedures which meet the requirements in paragraphs (b)(1) through (5) of this section.

(1) A network-based transportation demand model or models relating travel demand and transportation system performance to land-use patterns, population demographics, employment, transportation infrastructure, and transportation policies must be used to

estimate travel within the metropolitan planning area of the nonattainment area. Such a model shall possess the following attributes:

(i) The modeling methods and the functional relationships used in the model(s) shall in all respects be in accordance with acceptable professional practice, and reasonable for purposes of emission estimation;

(ii) The network-based model(s) must be validated against ground counts for a base year that is not more than 10 years prior to the date of the conformity determination. Land use, population, and other inputs must be based on the best available information and appropriate to the validation base year;

(iii) For peak-hour or peak-period traffic assignments, a capacity sensitive assignment methodology must be used;

(iv) Zone-to-zone travel times used to distribute trips between origin and destination pairs must be in reasonable agreement with the travel times which result from the process of assignment of trips to network links. Where use of transit currently is anticipated to be a significant factor in satisfying transportation demand, these times should also be used for modeling mode splits;

(v) Free-flow speeds on network links shall be based on empirical observations;

(vi) Peak and off-peak travel demand and travel times must be provided;

(vii) Trip distribution and mode choice must be sensitive to pricing, where pricing is a significant factor, if the network model is capable of such determinations and the necessary information is available;

(viii) The model(s) must utilize and document a logical correspondence between the assumed scenario of land development and use and the future transportation system for which emissions are being estimated. Reliance on a formal land-use model is not specifically required but is encouraged;

(ix) A dependence of trip generation on the accessibility of destinations via the transportation system (including pricing) is strongly encouraged but not specifically required, unless the network model is capable of such deter-

minations and the necessary information is available;

(x) A dependence of regional economic and population growth on the accessibility of destinations via the transportation system is strongly encouraged but not specifically required, unless the network model is capable of such determinations and the necessary information is available; and

(xi) Consideration of emissions increases from construction-related congestion is not specifically required.

(2) Highway Performance Monitoring System (HPMS) estimates of vehicle miles traveled shall be considered the primary measure of vehicle miles traveled within the portion of the nonattainment or maintenance area and for the functional classes of roadways included in HPMS, for urban areas which are sampled on a separate urban area basis. A factor (or factors) shall be developed to reconcile and calibrate the network-based model estimates of vehicle miles traveled in the base year of its validation to the HPMS estimates for the same period, and these factors shall be applied to model estimates of future vehicle miles traveled. In this factoring process, consideration will be given to differences in the facility coverage of the HPMS and the modeled network description. Departure from these procedures is permitted with the concurrence of DOT and EPA.

(3) Reasonable methods shall be used to estimate nonattainment area vehicle travel on off-network roadways within the urban transportation planning area, and on roadways outside the urban transportation planning area.

(4) Reasonable methods in accordance with good practice must be used to estimate traffic speeds and delays in a manner that is sensitive to the estimated volume of travel on each roadway segment represented in the network model.

(c) *Areas which are not serious, severe, or extreme ozone nonattainment areas or serious carbon monoxide areas, or before January 1, 1995.* (1) Procedures which satisfy some or all of the requirements of paragraph (b) of this section shall be used in all areas not subject to paragraph (b) of this section in which those procedures have been the previous practice of the MPO.

(2) Regional emissions may be estimated by methods which do not explicitly or comprehensively account for the influence of land use and transportation infrastructure on vehicle miles traveled and traffic speeds and congestion. Such methods must account for VMT growth by extrapolating historical VMT or projecting future VMT by considering growth in population and historical growth trends for vehicle miles travelled per person. These methods must also consider future economic activity, transit alternatives, and transportation system policies.

(d) *Projects not from a conforming plan and TIP in isolated rural nonattainment and maintenance areas.* This paragraph applies to any nonattainment or maintenance area or any portion thereof which does not have a metropolitan transportation plan or TIP and whose projects are not part of the emissions analysis of any MPO's metropolitan transportation plan or TIP (because the nonattainment or maintenance area or portion thereof does not contain a metropolitan planning area or portion of a metropolitan planning area and is not part of a Metropolitan Statistical Area or Consolidated Metropolitan Statistical Area which is or contains a nonattainment or maintenance area).

(1) Conformity demonstrations for projects in these areas may satisfy the requirements of §§ 51.432, 51.440, and 51.446 with one regional emissions analysis which includes all the regionally significant projects in the nonattainment or maintenance area (or portion thereof).

(2) The requirements of § 51.432 shall be satisfied according to the procedures in § 51.432(c), with references to the "transportation plan" taken to mean the statewide transportation plan.

(3) The requirements of §§ 51.440 and 51.446 which reference "transportation plan" or "TIP" shall be taken to mean those projects in the statewide transportation plan or statewide TIP which are in the nonattainment or maintenance area (or portion thereof).

(4) The requirement of § 51.450(b) shall be satisfied if:

(i) The project is included in the regional emissions analysis which includes all regionally significant high-

way and transportation projects in the nonattainment or maintenance area (or portion thereof) and supports the most recent conformity determination made according to the requirements of §§ 51.432, 51.440, or 51.446 (as modified by paragraphs (d)(2) and (d)(3) of this section), as appropriate for the time period and pollutant; and

(ii) The project's design concept and scope have not changed significantly from those which were included in the regional emissions analysis, or in a manner which would significantly impact use of the facility.

(e) *PM<sub>10</sub> from construction-related fugitive dust.* (1) For areas in which the implementation plan does not identify construction-related fugitive PM<sub>10</sub> as a contributor to the nonattainment problem, the fugitive PM<sub>10</sub> emissions associated with highway and transit project construction are not required to be considered in the regional emissions analysis.

(2) In PM<sub>10</sub> nonattainment and maintenance areas with implementation plans which identify construction-related fugitive PM<sub>10</sub> as a contributor to the nonattainment problem, the regional PM<sub>10</sub> emissions analysis shall consider construction-related fugitive PM<sub>10</sub> and shall account for the level of construction activity, the fugitive PM<sub>10</sub> control measures in the applicable implementation plan, and the dust-producing capacity of the proposed activities.

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**§ 51.454 Procedures for determining localized CO and PM<sub>10</sub> concentrations (hot-spot analysis).**

(a) In the following cases, CO hot-spot analyses must be based on the applicable air quality models, data bases, and other requirements specified in 40 CFR part 51, appendix W ("Guideline on Air Quality Models (Revised)" (1988), supplement A (1987) and supplement B (1993), EPA publication no. 450/2-78-027R), unless, after the inter-agency consultation process described in § 51.402 and with the approval of the EPA Regional Administrator, these models, data bases, and other requirements are determined to be inappropriate: